

**THE JERSEY CITY
MUNICIPAL UTILITIES AUTHORITY**

MEMORANDUM

DATE: March 30, 2016

TO: Mayor Steven M. Fulop

FROM: Daniel F. Becht, Esq. Executive Director

SUBJECT: Testing of Jersey City Water Supply

Per your request independent sampling and testing of the Jersey City water supply was conducted by Garden State Laboratories (GSL) for the Jersey City Municipal Utilities Authority (JCMUA) during the months of February and March of 2016. I have attached their opinion letter as well as the clinical results and my staff review memo. I am pleased to announce, as I thought we were, we are in full compliance with all USEPA and NJ DEP rules and regulations as it pertains to providing safe and clean water to the citizens of Jersey City.

Additionally, the JCMUA and Suez Water Jersey City will provide any technical guidance requested by the Board of Education regarding any concerns related to lead in their facilities.

I hope this information satisfies your initial inquiry.

**THE JERSEY CITY
MUNICIPAL UTILITIES AUTHORITY**

MEMORANDUM

DATE: March 30, 2016

TO: Daniel F. Becht, Esq. Executive Director

FROM: Rajiv Prakash, P.E. Water Engineer

SUBJECT: Testing of Jersey City Water Supply

Independent sampling and testing of the Jersey City water supply was conducted by Garden State Laboratories (GSL) for the Jersey City Municipal Utilities Authority (JCMUA) during the months of February and March of 2016. The summary report prepared by GSL along with individual test results for all samples collected are attached. As part of the testing program, over 35 samples were collected and tested for over 200 parameters. The results indicate that the water supply meets all Federal and State Safe Drinking Water Standards.

The tested parameters included the following:

- Volatile Organic Compounds (VOCs)
- Inorganics (including lead and copper)
- Secondary Standards (including color, pH, odor and taste)
- Other contaminants (including disinfection byproducts, turbidity, coliform bacteria, and radiologicals)

In addition to the above testing, JCMUA and Suez Water Jersey City will provide any technical guidance requested by the Board of Education regarding any concerns related to lead in their facilities.

Please contact me if you have any questions.



Garden State Laboratories, Inc.

Bacteriological and Chemical Testing

410 Hillside Avenue
Hillside, New Jersey 07205



Toll Free 800-273-8901
Telephone 908-688-8900
Fax 908-688-8966
email: info@gsllabs.com
Internet: www.gsllabs.com

Mathew Klein, M.S., Founder (1916-1996)
Harvey Klein, M.S., Laboratory Director

March 29, 2016

Rajiv Prakash, PE
Jersey City Municipal Utilities Authority
555 Route 440
Jersey City, NJ 07304

r.prakash@jcmua.com

Summary of Drinking Water Analyses

As per your request I am providing you with a summary report for samples analyzed for a variety of regulated and unregulated compounds and bacteria.

The coliform analyses were all less than 1 coliform organism per 100 ml. This indicates the absence of coliform and *E. coli* bacteria. The free and total chlorine results were normal for municipal water systems and within the USEPA limit of 4.0 mg/l.

The trihalomethanes, haloacetic acids and volatile organic compounds were all within federal and state maximum contaminant levels (MCLs).

The secondary recommendations, except for corrosivity, were within the USEPA and NJDEP recommendations. The Langelier index is -1.49 which indicates a corrosive water environment. As informed by Suez Water Jersey City the compound ortho-phosphate is added to the water system. Ortho-phosphate is a corrosion inhibitor utilized to mitigate lead and copper corrosion.

Specific samples were analyzed for lead and copper. The USEPA Action Levels of 0.015 mg/l for lead and 1.3 mg/l for copper were not exceeded. Some samples did have lead and copper detected below the Action Levels.

The turbidity was low,

The primary inorganic compounds and radiological parameters were all below the federal and state MCLs.



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The Third Unregulated Contaminant Monitoring Regulation Rule (UCMR-3) parameters analyzed for were not detected except for hexavalent chromium, chlorate and strontium.

The compounds in the UCMR-3 group do not have legal MCLs in the State of New Jersey. The detected compounds are less than the referenced items.

The State of California has a MCL for hexavalent chromium at 10 ug/l. The hexavalent chromium result of 0.07 ug/l is below the California MCL.

I have not located any MCL for chlorate. I am attaching an AWWA document, The Potential Regulatory Implications of Chlorate, March 2014. The chlorate health reference level (HRL) is 210 ug/l. The result of 75 ug/l is below this HRL.

I have not located any MCL for strontium. I am attaching an American Water Works Association (AWWA) document, The Potential Regulatory Implications of Strontium, March 2014. In this document the health reference level (HRL) is 4,200 ug/l. The result of 77 ug/l is below this HRL.

Based upon the analyses performed the water distributed by the JCMUA appears to meet State and Federal standards.

Respectfully submitted,

Harvey Klein, M.S.
Laboratory Director
Garden State Laboratories, Inc.

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Harvey Klein, M.S., Laboratory Director

REPORT OF ANALYSIS

Toll Free 800-273-8901
Telephone 908-688-8900
Fax 908-688-8966
email: info@gsllabs.com
Internet: www.gsllabs.com

REPORT # 360225078.1

CLIENT # JER17

DATE SUBMITTED: 2/25/16

TO: Jersey City Municipal Utilities Authority
555 Route 440

Jersey City

NJ 07304

ATT: Rajiv Prakash

SAMPLE TYPE: DRINKING WATER, GRAB SAMPLE

SAMPLE ID:

SAMPLE LOCATION: ROMAINE METER HOUSE, GATE, 640 GREENBANK RD.
BOONTON, NJ

DATE SAMPLED: 2/25/16

TIME SAMPLED: 12:25

ANALYSIS	RESULT	UNITS	MCL	DATE ANALYZED
Volatile Organic Compounds				3/2/16
Method: 524.2; page 1 of 3				
Dichlorodifluoromethane	<0.5	ug/l		
Chloromethane	<0.5	ug/l		
Vinyl Chloride	<0.5	ug/l	2	
Bromomethane	<0.5	ug/l		
Chloroethane	<0.5	ug/l		
Trichlorofluoromethane	<0.5	ug/l		
1,1-Dichloroethylene	<0.5	ug/l	2	
Methylene Chloride	<0.5	ug/l	3	
Methyl tert-Butyl Ether	<0.5	ug/l	70	
t-1,2-Dichloroethylene	<0.5	ug/l	100	
Isopropyl Ether	<0.5	ug/l		
1,1-Dichloroethane	<0.5	ug/l	50	
2,2-Dichloropropane	<0.5	ug/l		
cis-1,2-Dichloroethylene	<0.5	ug/l	70	
Chloroform	2.3	ug/l		
Bromochloromethane	<0.5	ug/l		
1,1,1-Trichloroethane	<0.5	ug/l	30	
1,1-Dichloropropylene	<0.5	ug/l		
Carbon Tetrachloride	<0.5	ug/l	2	
Benzene	<0.5	ug/l	1	
1,2-Dichloroethane	<0.5	ug/l	2	
Trichloroethylene	<0.5	ug/l	1	
1,2-Dichloropropane	<0.5	ug/l	5	
Bromodichloromethane	2.1	ug/l		

< = less than, not detected.

MCL = Maximum Contaminant Level allowed by State and Federal regulations.

Harvey Klein

293822

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BOONTON, NJ

DATE SAMPLED: 2/25/16

TIME SAMPLED: 12:25

ANALYSIS	RESULT	UNITS	MCL	DATE ANALYZED
Volatile Organic Compounds				3/2/16
Method: 524.2; page 2 of 3				
Dibromomethane	<0.5	ug/l		
Toluene	<0.5	ug/l	1000	
1,1,2-Trichloroethane	<0.5	ug/l	3	
Tetrachloroethylene	<0.5	ug/l	1	
1,3-Dichloropropane	<0.5	ug/l		
Dibromochloromethane	0.6	ug/l		
1,2-Dibromoethane	<0.5	ug/l		
Chlorobenzene	<0.5	ug/l	50	
Ethylbenzene	<0.5	ug/l	700	
1,1,1,2-Tetrachloroethane	<0.5	ug/l		
o-Xylene	<0.5	ug/l	1000	
m&p-Xylene	<0.5	ug/l	1000	
Xylenes, total	<0.5	ug/l	1000	
Styrene	<0.5	ug/l	100	
Isopropyl Benzene	<0.5	ug/l		
Bromoform	<0.5	ug/l		
1,1,2,2-Tetrachloroethane	<0.5	ug/l	1	
1,2,3-Trichloropropane	<0.5	ug/l		
n-Propyl Benzene	<0.5	ug/l		
Bromobenzene	<0.5	ug/l		
1,3,5-Trimethyl Benzene	<0.5	ug/l		
2-Chlorotoluene	<0.5	ug/l		
4-Chlorotoluene	<0.5	ug/l		
tert-Butylbenzene	<0.5	ug/l		

< = less than, not detected.

MCL = Maximum Contaminant Level allowed by State and Federal regulations.

Harvey Klein

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Analytical Report

Serialized: 03/09/2016 07:22pm qc21

MR. D. OMARE
GARDEN STATE LABORATORIES, INC.
410 HILLSIDE AVENUE
HILLSIDE, NJ 07205

Regarding:

GARDEN STATE LABORATORIES, INC.
410 HILLSIDE AVENUE
HILLSIDE, NJ 07205

PROJECT ID:

W01955

LABORATORY REPORT NUMBER:

L6091221



Authorized by: Raphael C. Fratti, Laboratory Director

QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA188, NY 11223
State ID's: CT PH-0788, DE PA-018, MD 208, SC 89021001; FDA Reg. #: 2515238
Delaware Division: State ID's: DE 00011, MD 138
Vineland Division: State ID: NJ 08005; Reading Div: State ID: PA 06-03543
Wind Gap Division: State ID's: PA 48-01334, NJ PA001
E. Rutherford Division: State ID: NJ 02015

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 • Phone: 215-355-3900 • Toll Free: 800-289-8378 • Fax: 215-355-7231 • www.qclaboratories.com

Eurofins QC, Inc.

Analytical Report

Printed 03/09/16 19:22 QC21

GARDEN STATE LABORATORIES, INC.
W01955

P.O. No:
Inv. No: EOM-03/16 PI
PWSID:

MR. D. OMARE
GARDEN STATE LABORATORIES, INC.
410 HILLSIDE AVENUE
HILLSIDE, NJ 07205

Regarding:
MR. D. OMARE
GARDEN STATE LABORATORIES, INC.
410 HILLSIDE AVENUE
HILLSIDE, NJ 07205

SAMPLE SUMMARY

Lab ID	Collected	Received	Matrix	Client ID
L6091221-1	02/25/16 12:25	02/26/16 20:05	WATER	360225078.2, ROMAINE METER HOUSE, GATE, BOONTON

PIN: 88451

Serial Number: 5368703

Eurofins QC, Inc.

Analytical Report

Printed 03/09/16 19:22

Sample Description: 360225078.2, ROMAINE METER HOUSE, GATE, BOONTON
Sample Number: L6091221-1
Matrix: WATER
Received Temp: 1.5 C
Samp. Date/Time/Temp: 02/25/16 12:25pm NA C
Sampled by: Customer
Iced (Y/N): Y

GENERAL CHEMISTRY

Analytical Method: SM 4500CN C,E
Dilution: 1
Units: mg/l

Run Date: 03/08/16 03:00PM
Analyst: JG
Instrument: Hach DR/2400

Workgroup: 160308CN
File ID:
Basis:

Parameter
Cyanide, total

CAS
57-12-5

Result
ND

MDL*
0.00240

RL
0.0200



*=This limit was used in the evaluation of the final result.

PIN: 88451

Serial Number: 5368703

DEFINITIONS

Eurofins QC, Inc. (EOC)

The following terms or abbreviations are used in this report:

MPN	Most probable number	PL	Customer-specific limit
CFU	Colony forming unit	DF	Dilution Factor (For Microbiology, DF = volume of sample tested)
POS	Positive / Present	QUAL	Qualifier (Q)
NEG	Negative / Absent	NTU	Nephelometric turbidity units
PRES	Presumptive	RL	Laboratory reporting limit or Limit of Quantitation (LOQ)
MF	Membrane Filtration	MCL	EPA recommended "Maximum Contaminant Level"
TNTC	Too numerous to count	MDL	Method Detection Limit
DRY	The result was reported on a dry weight basis.	ND	Analyte concentration not detected greater than the RL / MDL

TIC Tentatively Identified Compounds (Library Search Compounds); concentrations are estimated values only.

ppm (mg/L) Parts per million: equivalent to 1 milligram per kilogram (mg/Kg) for solids or one milligram per liter (mg/L) for aqueous samples.

ppb (ug/L) Parts per billion: equivalent to 1 microgram per kilogram (ug/Kg) for solids or one microgram per liter (ug/L) for aqueous samples.

< Less than: In conjunction with a numerical value, indicates a concentration less than RL / MDL.

> Greater than: In conjunction with a numerical value, indicates a concentration greater than RL / MDL.

Data Qualifiers (EPA CLP Convention)

J	Estimated value \geq MDL but < RL. Applies to organics and general chemistry	B	Metals: Value is \geq MDL and < RL
B	Analyte was detected in the method blank	E	Metals: Estimated value due to presence of interference
E	Concentration exceeds calibration range	M	Metals: Duplicate precision for an element outside control limit
U	Analyte not detected above MDL/RL	N	Metals: Spike recovery for an element outside control limits
N	Presumptive evidence of compound in library search	C	Result confirmed by reanalysis
P1 or P	Column precision criteria not met, report lower value	Q	Defined in report or case narrative or data package
P2	Column precision criteria not met, report higher value	V	Analyte concentration >100% between columns; reporting limit elevated
T	Temperature receipt exceedance, refer to Sample Comments/Results Qualifiers section.		

Warranties, Terms, and Conditions

- Unless otherwise specified in the Parameter field, analyses (excluding "Field Parameters") were performed at the EQC Southampton facility (1205 Industrial Boulevard, Southampton, PA 18966). Pharmaceutical testing is performed the EQC facility in Horsham (702 Electronic Drive, Horsham, PA 19044).
- The test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.
- The report shall not be reproduced, except in full, without the written consent of the laboratory.
- All samples are collected as "grab" samples unless otherwise identified.
- The reported results relate only to the sample as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.
- EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance. EQC's internet program "LIVE ACCESS" will provide you with real-time access to collection dates and testing results. Please contact Customer Service for further information.
- The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry), Amanda Berd (Pharmaceutical), Sue Abbott (EQC Delaware).

EOC Accreditations

Southampton	EPA ID: PA00018	Eurofins, Lancaster: Lab IDs: PA 36-00037
	NELAP IDs: PA 09-00131; NJ PA166; NY 11223	NJ: PA011
	State IDs: CT PH-0768; DE PA-018; MD 206	NY: 10670
	FDA Reg #: 2515238	
Delaware	State IDs: DE 00011; MD 138	Reading State ID: PA 06-03543
Wind Gap	State IDs: PA 48-01334; NJ PA001	Vineland State ID: NJ 06005
East Rutherford	State ID: NJ 02015	

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E-Mail: info@gslabs.com

CHAIN OF CUSTODY RECORD

(PRESS HARD AND PRINT CLEARLY - USE BALL POINT PEN)

North Jersey Office: 66091221
225 Sparta Ave., Sparta, NJ 07871
Tel: 973-729-1827 / Fax: 973-729-2126
South Jersey Office:
515 Route 9 South, Barnegat, NJ 08005
Tel: 609-698-0199/800-625-7200 / Fax: 609-698-0910
West Jersey Office:
2050 Route 31 North, Glen Gardner, NJ 08826
Tel: 908-537-7414 / Fax: 908-537-7415

FOR SAMPLE RECEIVING USE ONLY		DATE/TIME RECEIVED: 6/1/05	
GSL CLIENT #			
MICRO #			
CHEM #			
SAMPLE RECEIVED BY:			
<input type="checkbox"/> GEL FIELD SAMPLE PICK-UP			
<input type="checkbox"/> PICK-UP AT DROPPED OFF LOCATION			
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CONTAINER INFORMATION			
No.	Type	Size	Pres.
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ANALYSIS REQUIRED (Print Legibly)		CYANIDE	
<input type="checkbox"/> List attached		Total Pages	
SAMPLE COLLECTION			
Date	Time	AM	PM
2/25/12:25			X
SAMPLE ID			
360225078.2			
SAMPLE LOCATION: RDMAIN S METER HOUSE, GATE, 640 Greenbank Rd. Bonton			
SAMPLE TYPE: DRINKING WATER			
City/State/Zip: HILLSIDE, NJ 07205			
Contact/Authorized by: DANVAS OMARE			
Phone: 908-688-8900 EXT. 21			
Fax: 908-688-8966			
GARDEN STATE LABS			
Mailing Address: 410 HILLSIDE AVENUE			
TURNAROUND TIME (T/A/T):			
<input checked="" type="checkbox"/> Standard		<input type="checkbox"/> Rush	
REPORT FORMAT:			
<input checked="" type="checkbox"/> Standard Report		<input type="checkbox"/> Other/Specify:	
<input type="checkbox"/> Standard Report + State Forms		PWS ID#:	
SAMPLING/PICK-UP FEE: \$		COMPOSITE FEE: \$	
<input type="checkbox"/> Credit Card Type:		<input type="checkbox"/> Check #	
RUSH FEE: \$		OTHER: \$	
AMOUNT DUE: \$		AMOUNT PAID: \$	
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EAST RUTHERFORD-SOUTHAMPTON

1205 Industrial Highway, Southampton, PA 18966



Inter-Laboratory Transport Form: ES02Z616

Coolers for Transport

[illegible]



Garden State Laboratories, Inc.

Bacteriological and Chemical Testing
410 Hillside Avenue
Hillside, New Jersey 07205

Mathew Klein, M.S., Founder (1916-1996)
Harvey Klein, M.S., Laboratory Director

REPORT OF ANALYSIS

TO: Jersey City Municipal Utilities Authority
555 Route 440

Jersey City
ATT: Rajiv Prakash

NJ 07304



Toll Free 800-273-8901
Telephone 908-688-8900
Fax 908-688-8966
email: info@gsllabs.com
Internet: www.gsllabs.com

REPORT # 360225078.3

CLIENT # JER17

DATE SUBMITTED: 2/25/16

SAMPLE TYPE: DRINKING WATER, GRAB SAMPLE

SAMPLE ID:

SAMPLE LOCATION: ROMAINE METER HOUSE, GATE, 640 GREENBANK RD.
BOONTON, NJ

DATE SAMPLED: 2/25/16

TIME SAMPLED: 12:25

ANALYSIS	RESULT	UNITS	MCL	DATE ANALYZED
MBAS, SM 5540 C	<0.1	mg/l, MBAS	0.5	2/26/16-16:52
Total Alkalinity, SM 2320 B	34*	mg/l as CaCO ₃		3/16/16
Aluminum, EPA 200.7	<0.150	mg/l	0.2	3/2/16
Chloride, SM 4500 CL-B	98	mg/l	250	3/3/16
Color, SM 2120 B	<5	Color Units	10	2/25/16-21:33
Copper, SM 3111B	<0.010	mg/l	1.3	3/2/16
Corrosivity	- 1.49	Langlier Index	+/- 1.0	3/16/16
Fluoride, SM 4500 F-C	0.15	mg/l	4.0	3/4/16
Total Hardness, EPA 200.7	74.2	mg/l as CaCO ₃	250	3/2/16
Iron, Total, EPA 200.7	<0.050	mg/l	0.3	3/2/16
Manganese, Total, EPA 200.7	0.024	mg/l	0.05	3/2/16
Odor, SM 2150 B	<1	Threshold number	3 TON	2/25/16-21:14
pH on site, 20 EdSM 4500 H+B	7.55	Standard Units	6.5-8.5	2/25/16-12:28
Silver, EPA 200.8	<0.0005	mg/l	0.1	2/26/16
Sulfate, SM 4500 SO ₄ -E	27.6	mg/l	250	3/1/16
Temperature on site, SM 2550 B	9.16	°C		2/25/16-12:26
T. Dissolved Solids, SM 2540C	255	mg/l	500	3/2/16
Zinc, EPA 200.7	<0.030	mg/l	5.0	3/2/16
Calcium Hardness, EPA 200.7	46.4	mg/l as CaCO ₃		3/2/16

< = less than, not detected.

MCL = Maximum Contaminant Level allowed by State and Federal regulations.

*Analyzed past holding time.

Harvey Klein

293822

The liability of Garden State Laboratories, Inc. for services rendered shall in no event exceed the amount of the invoice.
Certified by NJ Dept. of Health, NJDEP #20044, NY Dept. of Health #11550 and PADEP #68-03680.

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Garden State Laboratories, Inc.

Bacteriological and Chemical Testing

Internet: www.gslabs.com E-mail: info@gslabs.com

CHAIN OF CUSTODY RECORD

(PRESS HARD AND PRINT CLEARLY - USE BALL POINT PEN)

410 Hillside Ave., Hillside, NJ 07205

Tel. 908-688-8900/800-273-8901

Fax 908-688-8966

South Jersey

West Jersey

515 Route 9, Barnegat, NJ 08005

2050 Rt. 31 N, Glen Gardner, NJ 08826

Tel. 800-625-7200/609-698-0199

Tel. 908-537-7414

CLIENT INFORMATION

Name: GARDEN STATE LABORATORIES, INC.

Contact/Authorized by: DANVAS OMARE

Mailing Address: 410 Hillside Avenue

Phone: 908-688-8900

City/State/Zip: Hillside, NJ 07205

Fax: 908-688-8966

SAMPLE INFORMATION

SAMPLE TYPE: DRINKING WATER

SAMPLE LOCATION: ROMAINE METEL HOUSE

Grab Comp

SAMPLE COLLECTION

ANALYSIS REQUIRED (Print Legibly)

CONTAINER INFORMATION

360285078.4

2-25-16 12:05

NU Rapid Gross Alpha

No. 3 Pl L D

X

Radium 226 - Hold for future analysis (see note)

X

Uranium - Hold for future analysis (see note)

X

Uranium - Hold for future analysis (see note)

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Uranium - Hold for future analysis (see note)

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16.1851

Sampled by (PRINT): _____ Signature: _____ Date/Time: 2/25/16

Client/Client's Representative (PRINT): LISA WILLIAMS Signature: _____ Date/Time: 2/25/16

1. Received/Reinquished by (PRINT): _____ Signature: _____ Date/Time: 2-26-16

2. Received/Reinquished by (PRINT): _____ Signature: _____ Date/Time: 2-26-16

THE LIABILITY OF GARDEN STATE LABORATORIES, INC. FOR SERVICES RENDERED SHALL IN NO EVENT EXCEED THE AMOUNT OF THE INVOICE.

Certified by U.S. Public Health Service, N.J. Dept. of Health, N.Y. State Dept. of Health - Lab # 11550 and N.J. DEP - Lab # 10044

IX - 3/5/03-4E12

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LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

This report may not be reproduced, except in full, without written approval from EEA.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	4074-001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA160002	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies



LABORATORY CASE NARRATIVE

Client: Garden State Laboratories

Report #: 358415CN

All methods QC was within acceptance limits.

Note: This report may not be reproduced, except in full, without written approval from EEA.

		03/15/2016
Authorized Signature	Title	Date

Page 1 of 1

Client Name: Garden State Laboratories

Report #: 358415

Sampling Point: 360225078.6RomaineMeterHouse

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
18540-29-9	Chromium, Hexavalent	218.7	—	0.02	0.07	ug/L	—	03/01/16 17:30	3406979
14866-68-3	Chlorate	300.1	—	20	75	ug/L	—	03/02/16 08:12	3406978

Metals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
7440-47-3	Chromium	200.8	100 *	0.9	< 0.9	ug/L	03/02/16 10:30	03/03/16 18:55	3407449
7440-48-4	Cobalt	200.8	—	2.0	< 2.0	ug/L	03/02/16 10:30	03/03/16 18:55	3407449
7439-98-7	Molybdenum	200.8	—	2.0	< 2.0	ug/L	03/02/16 10:30	03/03/16 18:55	3407449
7440-24-6	Strontium	200.8	—	2.0	77	ug/L	03/02/16 10:30	03/03/16 18:55	3407449
7440-62-2	Vanadium	200.8	—	2.0	< 2.0	ug/L	03/02/16 10:30	03/03/16 18:55	3407449

Volatile Organic Chemicals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
123-91-1	1,4-Dioxane	522	—	0.07	< 0.07	ug/L	03/01/16 07:32	03/03/16 21:10	3406975
74-97-5	Bromochloromethane	524.3	—	0.06	< 0.06	ug/L	—	03/02/16 11:47	3406984
74-83-9	Bromomethane	524.3	—	0.2	< 0.2	ug/L	—	03/02/16 11:47	3406984
106-99-0	1,3-Butadiene	524.3	—	0.1	< 0.1	ug/L	—	03/02/16 11:47	3406984
75-45-6	Chlorodifluoromethane	524.3	—	0.08	< 0.08	ug/L	—	03/02/16 11:47	3406984
74-87-3	Chloromethane	524.3	—	0.2	< 0.2	ug/L	—	03/02/16 11:47	3406984
75-34-3	1,1-Dichloroethane	524.3	—	0.03	< 0.03	ug/L	—	03/02/16 11:47	3406984
96-18-4	1,2,3-Trichloropropane	524.3	—	0.03	< 0.03	ug/L	—	03/02/16 11:47	3406984

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	—	90	< 90	ng/L	03/08/16 06:29	03/09/16 06:04	3406976
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	10	< 10	ng/L	03/08/16 06:29	03/09/16 06:04	3406976
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	30	< 30	ng/L	03/08/16 06:29	03/09/16 06:04	3406976
375-95-1	Perfluorononanoic acid (PFNA)	537	—	20	< 20	ng/L	03/08/16 06:29	03/09/16 06:04	3406976
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	40	< 40	ng/L	03/08/16 06:29	03/09/16 06:04	3406976
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	20	< 20	ng/L	03/08/16 06:29	03/09/16 06:04	3406976
63-05-8	4-Androstene-3,17-dione	539	—	0.3	< 0.3	ng/L	03/07/16 07:37	03/11/16 06:10	3406980
474-86-2	Equilin	539	—	4	< 4	ng/L	03/07/16 07:37	03/11/16 06:10	3406980
50-28-2	17beta-Estradiol	539	—	0.4	< 0.4	ng/L	03/07/16 07:37	03/11/16 06:10	3406980
50-27-1	Estrilol	539	—	0.8	< 0.8	ng/L	03/07/16 07:37	03/11/16 06:10	3406980
53-16-7	Estrone	539	—	2	< 2	ng/L	03/07/16 07:37	03/11/16 06:10	3406980
57-63-6	17alpha-Ethinyl estradiol	539	—	0.9	< 0.9	ng/L	03/07/16 07:37	03/11/16 06:10	3406980
58-22-0	Testosterone	539	—	0.1	< 0.1	ng/L	03/07/16 07:37	03/11/16 06:10	3406980

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.



Eaton Analytical

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: Garden State Laboratories

Attn: Harvey Klein
410 Hillside Avenue
Hillside, NJ 07205

Report: 358415

Priority: Standard Written

Status: Final

PWS ID: Not Supplied

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3406982	360225078.6RomaineMeterHouse	200.8	02/25/16 12:25	Client	02/29/16 06:40
Report Summary					

Note: The sample bottle was empty upon receipt.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Jim Vernon at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Authorized Signature

Title

Page 1 of 1

Date

03/15/2016

Page 7 of 11



**110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207**

Order # 292181
Batch # 358415

Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

[illegible]

Sample analysis will be provided according to the standard EEA Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agreed to in writing by EEA.



Eaton Analytical

110 S. Hill Street
South Bend, IN 46817
T: 1.800.332.4345
F: 1.574.233.8207

Order # **292181**
Batch # **358415**

www.eatonanalytical.com

UCMR 3 CHAIN OF CUSTODY RECORD (EPTDS)

Page **1** of **1**

REPORT TO: Shaded area for EEA use only 608 2183114 Garden State Ave East Lab 410 Hillside Ave East Lab Hillside NJ 07205	SAMPLER (Signature)	PWS ID # N/A	STATE (sample origin)	Source Water Type	POB	
BILL TO: SAME			Sample Point Type	Sampling Event		
Entry Point to the Distribution System (EPTDS)						
SAMPLING SITE		Facility ID		Test Name UCMR3-	SAMPLE REMARKS	
COLLECTION		DATE		TIME	AM	PM
LAB Number 3406975						
1 360285078.6						
2 3406976						
3 977						
4 978						
5 979						
6 980						
7 981						
8 982						
9 983						
10 984						
11 985						

RELINQUISHED BY: (Signature) LISA WILSON	DATE 2/28/16	TIME 18:00	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature) (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY: SS	DATE	TIME

KEY	UCMR3 acceptance criteria for Receiving Checks:
* See Metal Samples Preservation Log	200.8 pH < 2
*P = Present	218.7 pH > 8
*A = Absent	522 pH < 4
	Where applicable-All samples must be absent of residual chlorine.

Sample analyses will be provided according to the standard EEA Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed void unless expressly agreed to in writing by EEA.

CONDITIONS UPON RECEIPT: **100% Within 2** **100% Within 2** **100% Within 2**
Samples received within 48 hours of collection must be received at a temperature of $\leq 10^{\circ}\text{C}$.
Samples received past 48 hours of collection must be received at a temperature of $\leq 5^{\circ}\text{C}$.
FTBs/LRBs upon lab receipt:
537 & 539 FTBs must be received in the corresponding blue labeled container:
EMailed client A boxes met 11 D. 11k
being empty d. 2-28-16
522 sample right of 80% volume after check (only required)
to be used issue: 150 Effective Date: 2014-05-01 150000
2-28-16



Shipping

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808885830373

Ship date

Thu 2/25/2016

HILLSIDE, NJ US

Actual delivery

Mon 2/29/2016 8:35 am

SOUTH BEND, IN US

Delivered

Signed for by: S. SPURGENM

Travel History

Date/Time	Activity	Location
2/29/2016 - Monday		
8:35 am	Delivered	SOUTH BEND, IN
7:54 am	On FedEx vehicle for delivery	SOUTH BEND, IN
7:00 am	At local FedEx facility	SOUTH BEND, IN
2/27/2016 - Saturday		
7:16 am	At destination sort facility	SOUTH BEND, IN
4:11 am	Departed FedEx location	SOUTH BEND, IN
2/26/2016 - Friday		
3:51 pm	Arrived at FedEx location	NEWARK, NJ
7:57 am	Departed FedEx location	INDIANAPOLIS, IN
1:24 am	Arrived at FedEx location	INDIANAPOLIS, IN
2/25/2016 - Thursday		
10:12 pm	Departed FedEx location	NEWARK, NJ
9:50 pm	Arrived at FedEx location	INDIANAPOLIS, IN
9:30 pm	Left FedEx origin facility	INDIANAPOLIS, IN
8:59 pm	Picked up	INDIANAPOLIS, IN

Shipment Facts

Tracking number	808885830373	Service	FedEx Priority Overnight
Weight	49 lbs 13.14 kg	Dimensions	24x14x14 in
Delivered To	Shipping Receiver	Total pieces	1
Total shipment weight	49 lbs 13.14 kg	Terms	Shipper
Packaging	Open Packaging	Special handling section	Deliver Weekday, Additional Handling Surcharge



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The liability of Garden State Laboratories, Inc. for services rendered shall in no event exceed the amount of the invoice.
Certified by NJ Dept. of Health, NJDEP #20044, NY Dept. of Health #11550 and PADEP #68-03680.

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